Appl. No. 10/682,252
Amdt. dated March 23, 2009
Amendment under 37 CFR 1.114
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.   (Currently Amended) A method of translating between data formats, comprising:

receiving a request to access data for one or more attributes, said request includes said attributes in a first data format and a filter for accessing the data of the attributes;

determining a relational database from a plurality of data stores to service said request, wherein the plurality of data stores comprises the relational database and at least one LDAP directory and wherein determining the relational database from the plurality of data stores comprises comparing the filter for accessing the data of the attributes to a partitioning expression for each of the data stores;

accessing a mapping catalog customizable for a relational database schema, said mapping catalog identifies one or more portions of one or more tables in the relational database that stores said data for said one or more attributes and a classification for each of the one or more of the attributes, said relational database corresponds to said relational database schema;

translating at least a portion of said request from said first data format to a form suitable for said relational database, said step of translating is based on said classification of each attribute and the filter; and

providing said translated request to said relational database.

2.   (Original) A method according to claim 1, wherein:

said first data format includes a logical object class format.

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3. (Previously Presented) A method according to claim 1, wherein:

said first data format is hierarchical.

4. (Original) A method according to claim 1, wherein:

said first data format uses LDAP format.

5. (Original) A method according to claim 1, wherein:

said one or more attributes are multi-valued.

6. (Original) A method according to claim 1, wherein:

said mapping catalog is customizable for any normalized relational database

schema.

7. (Original) A method according to claim 1, wherein:

said mapping catalog includes a mapped column in a table in said relational

database.

8. (Original) A method according to claim 1, wherein:

said mapping catalog includes, for a first attribute, an indication of a column in a

master table in said relational database for linking to first data in another table, said first data is

for said first attribute.

9. (Original) A method according to claim 1, wherein:

said mapping catalog includes, for a first attribute, an indication of a first column

in a first table in said relational database for linking to a first column in a second table and an

indication of a second column in said second table for linking to a first column in a third table,

said first column in said third table is used to identify data for said first attribute.

10. (Original) A method according to claim 1, wherein:

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said step of translating includes mapping said one or more attributes to said relational database, translating sub filters of said request into SELECT statements, and combining said SELECT statements; and

said step of providing includes accessing a set of primary key values for a master table in said relational database based on said combined SELECT statements and, for each primary key value of said set, accessing requested attributes from said request.

11. (Original) A method according to claim 1, wherein:

said step of translating includes creating INSERT statements based on said mapping catalog.

12. (Original) A method according to claim 1, wherein:

said step of translating includes creating one or more DELETE statements, one or more INSERT statements and one or more UPDATE statements based on said mapping catalog.

13. (Currently Amended) One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising:

receiving a request to access data for one or more attributes, said request includes said attributes in a first data format and a filter for accessing the data of the attributes;

determining a relational database from a plurality of data stores to service said request, wherein the plurality of data stores comprises the relational database and at least one LDAP directory and wherein determining the relational database from the plurality of data stores comprises comparing the filter for accessing the data of the attributes to a partitioning expression for each of the data stores;

accessing a mapping catalog customizable for a relational database schema, said mapping catalog identifies one or more portions of one or more tables in the relational database that stores said data for said one or more attributes and a classification for each of the one or

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more of the attributes, said relational database corresponds to said relational database schema; and

translating at least a portion of said request from said first data format to a form suitable for said relational database, said step of translating is based on said classification of each attribute and the filter.

14. (Original) One or more processor readable storage devices according to claim 13, wherein:

said first data format includes a logical object class format.

15. (Original) One or more processor readable storage devices according to claim 13, wherein:

said first data format is hierarchical.

16. (Original) One or more processor readable storage devices according to claim 13, wherein:

said first data format uses LDAP format.

17. (Original) One or more processor readable storage devices according to claim 13, wherein:

said mapping catalog is customizable for any normalized relational database schema.

18. (Original) One or more processor readable storage devices according to claim 13, wherein:

said mapping catalog includes a mapped column in a table in said relational database.

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19.   (Original) One or more processor readable storage devices according to claim 13, wherein:

said mapping catalog includes, for a first attribute, an indication of a column in a master table in said relational database for linking to first data in another table, said first data is for said first attribute.

20.   (Original) One or more processor readable storage devices according to claim 13, wherein:

said mapping catalog includes, for a first attribute, an indication of a first column in a first table in said relational database for linking to a first column in a second table and an indication of a second column in said second table for linking to a first column in a third table, said first column in said third table is used to identify data for said first attribute.

21.   (Currently Amended) An apparatus capable of translating between data formats, comprising:

means for receiving a request to access data for one or more attributes, said request includes said attributes in a first data format and a filter for accessing the data of the attributes;

means for determining a relational database from a plurality of data stores to service said request, wherein the plurality of data stores comprises the relational database and at least one LDAP directory and wherein determining the relational database from the plurality of data stores comprises comparing the filter for accessing the data of the attributes to a partitioning expression for each of the data stores;

means for accessing a mapping catalog customizable for a relational database, said mapping catalog identifies one or more portions of one or more tables in said relational database that stores said data for said one or more attributes and a classification for each of the one or more of the attributes; and

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means for translating at least a portion of said request to access data from said first data format to a form suitable for said relational database, said step of translating is based on said classification of each attribute and the filter.

22.   (Original) An apparatus according to claim 21, wherein:

said first data format includes a hierarchical logical object class format that uses LDAP format; and

said mapping catalog is customizable for any normalized relational database schema.

23.   (Original) An apparatus according to claim 21, wherein:

said mapping catalog includes, for a first attribute, an indication of a first column in a first table in said relational database for linking to a first column in a second table and an indication of a second column in said second table for linking to a first column in a third table, said first column in said third table is used to identify data for said first attribute.

24.   (Currently Amended) A system for translating between data formats, comprising:

a data source interface in communication with business logic;

a partitioning module receiving access request information from said data source interface, wherein said partitioning module determines a relational database from a plurality of data stores to service said request, wherein the plurality of data stores comprises the relational database and at least one LDAP directory and wherein determining the relational database from the plurality of data stores comprises comparing the filter for accessing the data of the attributes to a partitioning expression for each of the data stores;

a mapping catalog identifying one or more portions of one or more tables in the relational database that stores data for one or more attributes and a classification for each of the one or more attributes; and

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a translation module receiving access request information from said said partitioning module and mapping information from said mapping catalog, said access request information pertains to data for the one or more attributes and includes a filter for accessing the data of the attributes, said translation module translates said request information from a first form to a second form suitable for the relational database based on said mapping information from said mapping catalog including said classification and the filter.

25.   (Original) A system according to claim 24, wherein:

said mapping catalog is customizable for any normalized relational database schema.

26.   (Original) A system according to claim 24, wherein:

said mapping catalog identifies one or more portions of one or more tables in said relational database that stores said data for said one or more attributes.

27.   (Original) A system according to claim 24, wherein:

said translation module provides said translated request information for execution on said relational database.

28.   (Original) A system according to claim 27, wherein:

said translation module receives a result from said relational database, said result is based on said translated request information, said translation module translates said result to said first form.

29.   (Original) A system according to claim 24, wherein:

said first form includes a logical object class format.

30.   (Original) A system according to claim 24, wherein:

said first form uses LDAP format.

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31.   (Currently Amended) One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors, said processor readable code comprising:

code implementing a data source interface in communication with business logic;

code for implementing a partitioning module receiving access request information from said data source interface, wherein said partitioning module determines a relational database from a plurality of data stores to service said request, wherein the plurality of data stores comprises the relational database and at least one LDAP directory and wherein determining the relational database from the plurality of data stores comprises comparing the filter for accessing the data of the attributes to a partitioning expression for each of the data stores;

code implementing a mapping catalog, wherein the mapping catalog identifies one or more portions of one or more tables in the relational database that stores data for one or more attributes and a classification for each of the one or more attributes; and

code implementing a translation module receiving access request information from said partitioning module and mapping information from said mapping catalog, said access request information pertains to data for the one or more attributes and includes a filter for accessing the data of the attributes, said translation module translates said request information from a first form to a second form suitable for the relational database based on said mapping information from said mapping catalog including said classification and the filter.

32.   (Previously Presented) One or more processor readable storage devices according to claim 31, wherein:

said mapping catalog is customizable for any normalized relational database schema.

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33.   (Previously Presented) One or more processor readable storage devices according to claim 31, wherein:

said mapping catalog identifies one or more portions of one or more tables in said relational database that stores said data for said one or more attributes.

34.   (Previously Presented) One or more processor readable storage devices according to claim 31, wherein:

said translation module provides said translated request information for execution on said relational database.

35.   (Previously Presented) One or more processor readable storage devices according to claim 34, wherein:

said translation module receives a result from said relational database, said result is based on said translated request information, said translation module translates said result to said first form.

36.   (Previously Presented) One or more processor readable storage devices according to claim 31, wherein:

said first form includes a logical object class format.

37.   (Previously Presented) One or more processor readable storage devices according to claim 31, wherein:

said first form uses LDAP format.